

What is claimed is:

Sub B63 1 1. In a network computing system, an apparatus for providing
2 direct processing access between (a) application servers and
3 application users comprising:

4 a main storage capable of establishing processing
5 communication with an application server;

6 said main storage containing a queuing mechanism for
7 retrieval and storage of incoming and outgoing data without
8 causing interrupts in any running programs;

9 an interface element capable of establishing processing
10 communication with at least one application user;

11 an interrogator for examining multiple queues in said
12 queue mechanism to transfer appropriate requests, responses and
13 data between said application server(s) and said application
14 user(s).

1 2. The apparatus of claim 1, wherein said Interface Element
2 further comprises of a Connector Interface Element and a Network
3 Interface Element.

1 3. The apparatus of claim 2, wherein said Connector
2 Interface Element is in processing communication with said main
3 storage via a Self-Timed Interface or an STI bus.

1 4. The apparatus of claim 2, wherein said Connector
2 Interface Element comprises a plurality of processors.

1 5. The apparatus of claim 4, wherein one of said plurality
2 of processors is used for redundancy purposes.

1 6. The apparatus of claim 2, wherein said main storage can
2 be in processing communication with a plurality of network
3 elements and servers.

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1 7. The apparatus of claim 6, wherein said plurality of
2 networks comprise at least a web-servers.

1 8. The apparatus of claim 7, wherein said web-server is a
2 TCP/IP oriented server.

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1 9. The apparatus of claim 2, wherein said Connector and
2 said Network Interface Elements are in processing communication
3 with one another via a Peripheral Controller Interface bus or a
4 PCI bus.

1 10. The apparatus of claim 2, wherein said Network
2 Interface Element further comprises an I/O device adapters, at
3 least one more processor and a local storage area.

1 11. The apparatus of claim 10, wherein said Network
2 Interface Element is capable of connecting to one or more
3 individual application users.

1 12. The apparatus of claim 1, wherein said Interface Element
2 performs only a few special functions that replace multitudes of
3 channel functions normally performed by said computing network
4 environment.

1 13. The apparatus of claim 1, wherein said Interface
2 Element performs special functions that replace many functions
3 normally performed by one or more control units.

1 14. In a network computing system having a main storage
2 capable of connecting to at least one application server and an
3 interface element with at least one adapter capable of
4 establishing processing communication with at least one
5 application user(s), an apparatus for providing direct processing
6 access between said main storage and said adapter comprising:

7 data receivers set up in said application server for
8 processing data;

9 a plurality of queues located in main storage for
10 providing continuous running of programs without interruptions;

11 an updatator for changing the status of said network
12 computing system every time new data is received, deleted or
13 modified;

14 an interrogator for interrogating multiple existing
15 queues in said main storage simultaneously to process any
16 received data or requests;

17 a determinator for interrogation and routing of data to
18 appropriate application user to which said data has to be
19 forwarded to.

1 15. The apparatus of claim 14, wherein said Interface
2 Element further comprises of a Connector Interface Element and a
3 Network Interface Element.

1 16. The apparatus of claim 15, wherein said Connector
2 Interface Element is in processing communication with said main
3 storage via a Self-Timed Interface or an STI bus.

1 17. The apparatus of claim 15, wherein said main storage can
2 be in processing communication with a plurality of network
3 elements and servers.

Sub B9 1 18. The apparatus of claim 15, wherein said Connector and
2 said Network Interface Elements are in processing communication
3 with one another via a Peripheral Controller Interface bus or a
4 PCI bus.

5 19. The apparatus of claim 15, wherein said Network
6 Interface Element further comprises an I/O device adapters, at
7 least one more processor and a local storage area.

8 20. The apparatus of claim 19, wherein said Network
9 Interface Element is capable of connecting to one or more
10 individual application users.

1 21. The apparatus of claim 15, wherein said Connector
2 Interface Element is in processing communication with said main
3 storage via a direct access memory I/O device.

Sub B10 1 22. The apparatus of claim 15, wherein said Connector and
2 said Network Interface Elements are in processing communication
3 with one another via a direct access memory I/O device.